MATERIAL SAFETY DATA SHEET
BATTERIES WET, FILLED WITH ALKALI, ELECTRIC STORAGE

MSDS Safety Information
Product ID: BATT, WET, FILLED WITH ALKALI, 8, UN2795, PGIII
(NICKEL CADMIUM BATTERY)
Responsible Party
Name: HBL POWER SYSTEMS LTD / Storage Battery Systems, Inc.
Address: N56 W16665 Ridgewood Drive
Menomonee Falls, WI TEL: (262) 703-5800 FAX (262) 703-3073
Emergency Phone Number: (262) 703-5800
Review Ind: Y
Published: Y

Contractor Summary
Name: HBLNIFE POWER SYSTEMS LTD
8-2-601, ROAD No.10, BANJARA HILLS,

Item Description Information
Item Name: BATTERY, STORAGE
Specification Number: UNKNOWN
Unit of Issue: SET
UI Container Qty: 1
Type of Container: POLYPROPYLENE

Ingredients
Name: CADMIUM (SARA 313) (CERCLA) PLUS INGRED #2 % Wt: 6
Other REC Limits: NONE RECOMMENDED
OSHA PEL: 0.2 MG/M3 DUST; Z-2
ACGIH TLV: 0.01 MG/M3 DUST; 9596
EPA Rpt Qty: 10 LBS
DOT Rpt Qty: 10 LBS

Name: CADMIUM HYDROXIDE PLUS INGRED #1 % Wt: SEE #1
Other REC Limits: NONE RECOMMENDED
OSHA PEL: 0.05 MG CD/M3
ACGIH TLV: 0.05 MG CD/M3

Name: NICKEL (SARA 313) (CERCLA) PLUS INGRED #4 % Wt: 9
Other REC Limits: NONE RECOMMENDED
OSHA PEL: 1 MG/M3
ACGIH TLV: 1 MG/M3; 9596

Name: NICKEL HYDROXIDE (SARA 313) (CERCLA) PLUS INGRED #3 % Wt: SEE #3
Other REC Limits: NONE RECOMMENDED
OSHA PEL: 1 MG(NI)/M3
ACGIH TLV: 0.1 MG(NI)/M3; 9596
EPA Rpt Qty: 10 LBS
DOT Rpt Qty: 10 LBS

Name: POTASSIUM HYDROXIDE (CERCLA); KOH; CAUSTIC POTASH % Wt: 10
Other REC Limits: NONE RECOMMENDED
OSHA PEL: C 2 MG/M3
ACGIH TLV: C 2 MG/M3; 9596
EPA Rpt Qty: 1000 LBS
DOT Rpt Qty: 1000 LBS

Name: LITHIUM HYDROXIDE; LIOH; LITHIA % Wt: 0.5
Other REC Limits: NONE RECOMMENDED
OSHA PEL: NOT ESTABLISHED
ACGIH TLV: NOT ESTABLISHED

Health Hazards Data
LD50 LC50 Mixture: NONE SPECIFIED BY MANUFACTURER.
Route Of Entry Inds - Inhalation: YES
Skin: YES
Ingestion: YES
Carcinogenicity Inds - NTP: YES
IARC: YES
OSHA: YES
Effects of Exposure: ACUTE EXPO: KOH-BURNS TO TISSUE CONTACTED; NICKEL-POSSIBLE CONTACT DERMATITIS.CHRONIC EXPO: CADMIUM-POSSIBLE LUNG OR KIDNEY DAMAGE.NICKEL-POSSIBLE LUNG DAMAGE.
Explanation Of Carcinogenicity: PER MSDS: CARCINOGENICITY-D, NI.NTP/IARC/OSHA: YES.
Signs And Symptoms Of Overexposure: BURNS TO TISSUE CONTACTED, CONTACT DERMATITIS, LUNG/KIDNEY DAMAGE.
Medical Cond Aggravated By Exposure: INDIVIDUALS W/PRE-EXISTING DISEASE OF LUNGS MAY HAVE INCREASED SUSCEPTIBILITY TO TOXICITY OF EXCESSIVE EXPOSURES.
First Aid: IF KOH ELECTROLYTE SPILLED IMMED FLUSH EYE/SKIN FOR @LEAST 15MINS WHILE REMOVING CONTAM CLOTH/SHOES.MILD ACID MAY BE USED TO NEUTRALIZE KOH ON SKIN.IN ALL CASES CONTACT PHYSICIAN.IF SWALLOWED DO NOT INDUCE VOMITING.DRINK LARGE QUANTITIES OFWATER OR FRUIT JUICE.CONTACT PHYSICIAN.
Handling and Disposal
Spill Release Procedures: IF KOH ELECTROLYTE SPILLED COMPLY W/LOCAL, STATE AND FEDERAL REGULATIONS ON REPORTING RELEASES, CONTAINING SILLS/REMEDICATION.CONTAIN SPILL TO SMALLEST POSSIBLE AREA AND; ABSORB AS APPROPRIATE.
Neutralizing Agent: WEAK ACID SOLUTIONS.
Waste Disposal Methods: COMPLY W/LOCAL, STATE AND FEDERAL REGULATIONS.IF APPROVED NEURALIZE W/WEAK ACID SOLUTIONS AND TRANSFER TO WASTE TREATMENT SYSTEM.
Handling And Storage Precautions: AVOID ROUGH HNDLG.DO NOT STORE ABOVE 140F.ALWAYS HAVE WATER SAFETY SHOWERS/EYEWASH FOUNTAINS AVAILABLE.
Other Precautions: NO SMOKING REGULATIONS MUST BE ENFORCED DUE TO HYDROGEN GENERATION DURING BATTERY CHARGING.
Fire and Explosion Hazard Information
Flash Point Text: NA
Lower Limits: NA
Upper Limits: NA
Extinguishing Media: SUITABLE FOR SURROUNDING MATERIAL.
Fire Fighting Procedures: WEAR FULL PROTECTIVE CLOTHING USE NIOSH/MSHA-APPROVED POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS.
Unusual Fire/Explosion Hazard: TOXIC CADMIUM OXIDE FUMES MAY BE RELEASED DURING BURNING.POTASSIUM HYDROXIDE RXS VIOLENTLY W/ORG CHEMS, ESPECIALLY NITROCARBONS AND; CHLOROCARBONS,METALS (ZN,AL,SN)
Control Measures
Respiratory Protection: IF INCINERATED NIOSH/MSHA APPROVED POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS.
Ventilation: LOCAL EXHAUST-YES-DISCHARGE OUT OF WORK AREA.
Protective Gloves: RUBBER ACID-PROOF GAUNTLET GLOVES
Eye Protection: CHEM SPLASH GOGG,FULL-LENGTH FACE SHIELD
Other Protective Equipment: RUBBER OR PLASTIC APRON AND BOOTS; LONG SLEEVE WOOL, ACRYLIC OR POLYESTER CLOTHING; ACID-PROOF SUIT AND HOOD.
Work Hygienic Practices: ALWAYS USE EXTREME CARE; WASH THOROUGHLY AFTER HANDLING.
Physical/Chemical Properties
HCC: B1
B.P. Text: NA
M.P./F.P Text: NA
Vapor Pres: NA
Vapor Density: NA
Spec Gravity: NA
Evaporation Rate ANDamp; Reference: NA
Solubility in Water: NA
Appearance and Odor: RECTANGULAR PLASTIC CONTAINER ENCLOSING NICKEL AND CADMIUM ELECTRODES AND KOH ELECTROLYTE

Reactivity Data
Stability Indicator: YES
Stability Condition To Avoid: NONE SPECIFIED BY MANUFACTURER.
Materials To Avoid: DONT ALLOW KOH TO CONTACT ORGANIC CHEMS, ACIDS OR METALS SUCH AS ZINC, ALUMINUM, TIN.EXPO TO AIR FORMS POTASSIUM CARBONATE.
Hazardous Decomposition Products: TOXIC CADMIUM OXIDE FUMES MAY BE RELEASED IF INCINERATED.FLAMM HYDROGEN GAS PRODUCED DURING CHARGING.
Hazardous Polymerization Indicator: NO

Toxicological Information
Ecological Information
MSDS Transport Information
Regulatory Information
Other Information
Transportation Information
Product ID: BATT, WET, FILL W/ALKALI, 8, UN2795, PGIII (NICKEL CADMIUM BATTERY)
MSDS Prepared Date: 01/31/1995
Review Date: 09/01/2002
MFN: 1
Net Unit Weight: UNKNOWN
Multiple KIT Number: 0
Review IND: Y
Unit Of Issue: EA
Container QTY: 1
Type Of Container: BATTERY
Additional Data: PER MSDS:
BATTERY, WET, FILLED W/ALKALI, 8, UN 2795, PKG III.

Detail DOT Information
DOT Proper Shipping Name: BATTERIES, WET, FILLED WITH ALKALI
DOT PSN Modifier: ELECTRIC STORAGE
Hazard Class: 8
UN ID Num: UN2795
DOT Packaging Group: III
Label: CORROSIVE
Non Bulk Pack: 159
Bulk Pack: 159
Max Qty Pass: 30 KG GRO
Max Qty Cargo: NO LIMIT
Vessel Stow Req: A

Detail IMO Information
IMO PSN Code: BWF
IMO Proper Shipping Name: BATTERIES, WET, FILLED WITH ALKALI
IMO PSN Modifier: ELECTRIC STORAGE
IMDG Page Number: 8120
UN Number: 2795
UN Hazard Class: 8
IMO Packaging Group: III
Subsidiary Risk Label: -
EMS Number: 8-10
MED First Aid Guide NUM: 705

Detail IATA Information
IATA PSN Code: CZR
IATA UN ID Num: 2795
IATA Proper Shipping Name: BATTERIES, WET, FILLED WITH ALKALI,
IATA PSN Modifier: ELECTRIC STORAGE +
IATA UN Class: 8
IATA Label: CORROSIVE
UN Packing Group: III
Packing Note Passenger: 800
Max Quant Pass: NO LIMIT
Max Quant Cargo: NO LIMIT
Packaging Note Cargo: 800
Exceptions: A51

Detail AFI Information
AFI PSN Code: CZR
AFI Proper Shipping Name: BATTERIES, WET, FILLED WITH ALKALI
AFI PSN Modifier: ELECTRIC STORAGE
AFI Hazard Class: 8
AFI UN ID NUM: UN2795
AFI Packing Group: III
Special Provisions: P5
Back Pack Reference: A12.5

HAZCOM Label
Product ID: BATT, WET, FILL W/ALKALI, 8, UN2795, PGIII (NICKEL CADMIUM BATTERY)
Name: HBLNIFE POWER SYSTEMS LTD
Address: 8-2-601, ROAD No.10, BANJARA HILLS,
Emergency Phone Number: +91-98480 12583
Label Required IND: Y
Date Of Label Review: 05/28/1998
Status Code: C
Origination Code: F
Chronic Hazard IND: Y
Eye Protection IND: YES
Skin Protection IND: YES
Signal Word: CAUTION
Respiratory Protection IND: YES
Health Hazard: Slight
Contact Hazard: Slight
Fire Hazard: Slight
Reactivity Hazard: None

Hazard And Precautions: ACUTE EXPO: KOH-BURNS TO TISSUE CONTACTED; NICKEL-POSSIBLE CONTACT DERMATITIS.CHRONIC EXPO:CADMIUM-POSSIBLE LUNG OR KIDNEY DAMAGE.NICKEL-POSSIBLE LUNG DAMAGE. AVOID ROUGH HNDLG.DO NOT STORE ABOVE 140F.A LWAYS HAVE WATER SAFETY SHOWERS / EYEWASH FOUNTAINS AVAILABLE. FIRST AID: IF KOH ELECTROLYTE SPILLED IMMED FLUSH EYE/SKIN FOR @LEAST 15MINS WHILE REMOVING CONTAM CLOTH/SHOES.MILD ACID MAY BE USED TO NEUTRILIZE KOH ON SKIN.IN ALL CASES CONTACT PHYSICIAN.IF SWALLOWED DO NOT INDUCE VOMITING.DRINK LARGE QUANTITIES OF WATER OR FRUIT JUICE.CONTACT PHYSICIAN.TARGET ORGANS: TISSUE, LUNG, KIDNEY.